CLAIMS

1. A method for combining at least two adjacent image segments to form a larger composite image comprising:

establishing a first region in which a first image segment will be printed;

establishing a second region in which a second image segment will be printed;

defining a buffer region associated with both image segments;

printing the first image segment and the buffer region;

modifying the intensity in the buffer region by a first ramp value;

printing the second image segment and the buffer region; and

modifying the intensity in the buffer region by a second ramp value.

2. A method according to claim 1 wherein the image segments are substantially overlapping in the buffer region.

3. A method according to claim 1 wherein the first ramp rate and the second ramp rate are opposite one another.

4. A method according to claim 1 wherein the intensity in the buffer region sums to substantially full scale.

5. A method according to claim 1 wherein the buffer region is represented by a number of pixels from the first image segment and a number of pixels from the second image segment.

6. A method according to claim 1 wherein the printing is done through use of a photosensitive medium and intensity in the buffer region is modified by modulating the amplitude of a beam of electromagnetic radiation capable of exposing a photosensitive medium.

7. A method according to claim 6 wherein the intensity in the buffer region is modified by modulating the amplitude of a beam of light.

8. A method according to claim 6 wherein the intensity in the buffer region is modified by modulating the amplitude of a laser beam.

9. A method according to claim 6 wherein the amplitude of the beam is modified by external modulation.

10. A method according to claim 6 wherein the amplitude of the beam is modified by internal modulation.

11. A method according to claim 6 wherein the amplitude of the beam is modified by acoustic modulation.

12. A method according to claim 11 wherein the amplitude of the beam is modified by an Acousto-Optic Modulator.

13. A method according to claim 1 wherein the printing of the first and second image segments is achieved through a process selected from the group consisting of scanning a photosensitive medium by a rotating polygon, rotating single facet mirror or rotating holographic scanner illuminated by the exposing radiation source.

14. A method according to claim 1 wherein the printing of the first and second image segments is achieved through having a photosensitive medium exposed by a fixed pattern array of individually segmented light sources.

15. A method according to claim 14 wherein the printing of the first and second image segments uses a laser beam.

16. A method according to claim 14 wherein the printing of the first and second image segments uses light valves illuminated by a light source.

17. A method according to claim 14 wherein the printing of the first and second image segments uses micro-mirrors illuminated by a light source.

18. A method according to claim 1 wherein the printing of the first and second image segments is achieved through having a photosensitive medium exposed by a fixed pattern array of radiation sources.

19. A method for creating a buffer region for a composite image comprising:

defining the region as a number of pixels extending into any two adjacent image segments;

defining a first rate at which the intensity of the pixels in the buffer region will be attenuated across the region in printing a first image segment; and

defining a second rate at which the intensity of the pixels in the buffer region will be attenuated across the region in printing a second image segment.

20. A method according to claim 19 wherein the first rate and the second rate at which the intensity of the pixels is attenuated are opposite one another.

21. A method according to claim 19 wherein the intensity of the pixels in the buffer region sum to substantially full scale.

22. A printing system comprising:

a pixel counter;

an integrator which outputs an intensity value from an input ramp rate and an initial value;

a multiplier which converts digital pixel data and an intensity value into analog data; and an intensity modulator.

23. A printing system according to claim 22 wherein the intensity modulator is an amplitude modulator.

24. A printing system according to claim 23 wherein the amplitude modulator is an Acousto-Optic Modulator (AOM).

25. A printing system according to claim 22 wherein the intensity modulator is a phase modulator.

26. A printing system according to claim 22 wherein the intensity modulator is a frequency modulator.

27. A printing system according to claim 22 wherein the intensity modulator is a code domain modulator.

28. A printing system comprising:

means for counting pixels;

means for computing an intensity value from a ramp rate and an initial value;

means for converting an intensity value and digital pixel data into analog data;

and means for modulating intensity.

29. A printing system according to claim 28 wherein the ramp rate is defined as the percentage of modulation per in-scan pixel.

30. A printing system according to claim 28 wherein the intensity value is computed from a ramp rate and an initial value by an integrator.

31. A printing system according to claim 28 wherein the intensity value and digital pixel data are converted into analog data by a multiplier.

32. A printing system according to claim 28 wherein a means for modulating intensity is amplitude modulation.

33. A printing system according to claim 32 wherein the amplitude modulation is accomplished by an Acousto-Optic Modulator.

34. A printing system according to claim 28 wherein the means for modulating intensity is phase modulation.

35. A printing system according to claim 28 wherein the means for modulating intensity is frequency modulation.

36. A printing system according to claim 28 wherein the means for modulating intensity is code domain modulation.

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